

Examiner's Amendment

5. (currently amended) The method of claim 2, wherein the equalized frequency-domain signal is converted into the time domain by an [[IFFT]] inverse fast Fourier transform (IFFT) operation, and the ~~scrambled descrambled~~ time-domain signal is converted into the further ~~scrambled descrambled~~ signal in the frequency domain by ~~an FFT a fast~~ Fourier transform (FFT) operation.

6. (previously presented) The method of claim 1, further comprising
up-converting the data stream with the guard interval at a carrier frequency for transmission over a frequency selective fading channel.

7. (currently amended) A transmitter for use in frequency division multiple access communications wherein a signal indicative of a plurality of information bits are encoded and modulated into a plurality of coded symbols and the coded symbols are transformed into a further signal in time-domain, said transmitter comprising:

a scrambling module, responsive to the further signal, for providing a signal stream indicative of scrambled time-domain ~~scrambled~~ coded symbols; and

an appending module, responsive to the signal stream, for appending the scrambled coded symbols as redundancy data in a form of a guard interval for providing the to provide a data stream with the guard interval for transmission.

8. (previously presented) The transmitter of claim 7, wherein the guard interval has a length which is greater than a maximum delay spread.

9. (currently amended) A receiver for use in a frequency division multiple access communications system, the system having a transmitter which comprises:

means for encoding and modulating a signal indicative of a plurality of information bits into a plurality coded symbols;

means for providing a further signal in time domain indicative of the plurality of coded symbols;

means for scrambling the further signal to provide a scrambled signal;

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means for appending the scrambled signal as redundancy data in a form of a guard interval ~~for providing the~~ to provide a data stream with the guard interval for transmission; and

means for transmitting ~~[[a]]~~ the data stream ~~indicative of~~ with the guard-interval ~~signal~~; wherein the data stream received in the receiver is guard-interval removed, converted into frequency-domain and equalized ~~for providing~~ to provide an equalized frequency-domain signal, said receiver comprising:

a first module for converting the equalized ~~frequency-domain~~ frequency-domain signal to an equalized time-domain signal;

a second module for descrambling the equalized time-domain signal to provide a ~~descrambled~~ scrambled time-domain signal; and

a third module for converting the ~~scrambled~~ descrambled time-domain signal into a further ~~descrambled~~ scrambled signal in the frequency domain.

10. (currently amended) The receiver of claim 9, wherein the data stream received in the receiver is guard-interval removed, converted into the frequency-domain and then equalized ~~for providing an equalized frequency-domain signal~~ by a one-tap channel equalizer ^{the} ~~to provide an equalized frequency-domain signal~~.

11. (currently amended) The receiver of claim 9, wherein the first module comprises an inverse Fourier transform operation for converting the equalized frequency-domain signal to the equalized time-domain signal, and the third module comprises a Fourier transform operation for converting the ~~scrambled~~ descrambled time-domain signal to the further ~~scrambled~~ descrambled signal in the frequency domain.

12. (currently amended) A frequency division multiple access communications system, comprising:

a transmitter including:

a first module for encoding and modulating a signal indicative of a plurality of information bits into a plurality coded symbols to provide a further signal indicative of the plurality of coded symbols;